

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listing of claims in the application:

1-169. (canceled)

170. (currently amended) A method for producing an immune response, comprising

a) providing:

i) ~~an animal; and ii)~~ a composition comprising one of: 1) a hybrid particle comprising a ~~polypeptide~~ fusion protein comprising a ~~non-primate rodent~~ hepadnavirus core antigen and a heterologous antigen, and 2) an expression vector encoding said ~~polypeptide~~ fusion protein; and

b) administering said composition to ~~said animal~~ an animal under conditions such that an immune response is generated to said heterologous antigen.

171. (original) The method of claim 170, wherein said immune response comprises one or more of lymphocyte proliferative response, cytokine response and antibody response.

172. (original) The method of claim 171, wherein said antibody response comprises production of IgG antibodies.

173-175. (canceled)

176. (currently amended/withdrawn) A method for producing an immune response, comprising:

a) providing:

i) ~~an animal; and ii)~~ a composition comprising one ~~or more of~~: 1) a hybrid particle comprising a ~~polypeptide~~ fusion protein comprising a heterologous antigen and a nonhuman primate hepadnavirus core antigen; and 2) an expression vector encoding said ~~polypeptide~~ fusion protein; and

b) administering said composition to ~~said animal~~ an animal under conditions such that an immune response is generated to said heterologous antigen.

177. (withdrawn) The method of claim 176, wherein said immune response comprises one or more of lymphocyte proliferative response, cytokine response and antibody response.

178. (withdrawn) The method of claim 177, wherein said antibody response comprises production of IgG antibodies.

179-187. (canceled)

188. (previously presented) The method of Claim 170, wherein said animal is a human having pre-existing antibodies to hepatitis B virus core antigen.

189. (withdrawn) The method of Claim 176, wherein said animal is a human having pre-existing antibodies to hepatitis B virus core antigen.

190. (currently amended) The method of ~~Claim 174~~ Claim 170, wherein said rodent hepadnavirus core antigen is selected from the group consisting of a woodchuck hepadnavirus core antigen, a ground squirrel hepadnavirus core antigen, and an arctic ground squirrel hepadnavirus core antigen.

191. (withdrawn) The method of Claim 190, wherein said rodent hepadnavirus core antigen is a woodchuck hepadnavirus core antigen.

192. (previously presented) The method of Claim 190, wherein said rodent hepadnavirus core antigen is a ground squirrel hepadnavirus core antigen.

193. (withdrawn) The method of Claim 190, wherein said rodent hepadnavirus core antigen is an arctic ground squirrel hepadnavirus core antigen.

194. (canceled)

195. (withdrawn) The method of Claim 176, wherein said nonhuman primate hepadnavirus core antigen is selected from the group consisting of a chimpanzee hepatitis B virus core antigen, a gibbon hepatitis B virus core antigen, an orangutan hepatitis virus core antigen, and a woolly monkey hepatitis virus core antigen.

196. (previously presented) The method of Claim 170, wherein C-terminal sequence of the hepadnavirus core antigen is replaced by from 1 to 100 amino acids, and wherein said 1 to 100 amino acids does not consist of cysteine or of wild type C-terminal sequence of said hepadnavirus core antigen.

197. (withdrawn) The method of Claim 176, wherein C-terminal sequence of the hepadnavirus core antigen is replaced by from 1 to 100 amino acids, and wherein said 1 to 100 amino acids does not consist of cysteine or of wild type C-terminal sequence of said hepadnavirus core antigen.